

## DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

### "SEMICONDUCTOR DEVICE AND ITS MANUFACTURING METHOD"

Case No, 09792909-4676, the specification of which

(check one) ☒ is attached hereto  
was filed on November 22, 2000, as  
Application Serial No. 09/718,269  
and was amended on November 22, 2000  
(if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent Office all information which is known to me to be material to the patentability of this application in accordance with Title 37, Code of Federal Regulations. 1.56<sup>1</sup>

I do not know and do not believe this invention was ever known or used in the United States of America before my or our invention thereof, or patented or described in any printed publication in any country before my or our invention thereof or more than one year prior to this application, that the same was not in public use or on sale in the United States of America more than one year prior to this application, and I believe that the invention has not been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representatives or assigns more than twelve months prior to this application, and that no application for patent or inventor's certificate on this invention has been filed in any country foreign to the United States of America prior to this application by me or my legal representatives or assigns, except as identified below:

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below:

Prior Foreign Application(s) Number	Country	Date
<b>P11-334978</b>	<b>Japan</b>	<b>November 25, 1999</b>

and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the above listed application on which priority is claimed:

Prior Foreign Application(s) Number	Country	Date
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<sup>1</sup> (b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

(1) It establishes, by itself or in combination with other information, a *prima facie* case of unpatentability of a claim; or

(2) It refutes, or is inconsistent with, a position the application takes in:

(i) opposing an argument of unpatentability relied on by the Office, or  
(ii) asserting an argument of patentability.

A *prima facie* case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden of proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

If no priority is claimed, I have identified all foreign patent applications filed prior to this application:  
Prior Foreign Application(s)

Number

Country

Date

I hereby appoint the following attorneys, Kevin W. Guynn (No. 29,927), David R. Metzger (Reg. 32,919), Janelle D. Strode (Reg. 34,738), Michael L. Kiklis (Reg. 38,939), Jordan A. Sigale (Reg. 39,028), Jeffrey W. Wheeler (Reg. 39,066), Michael A. Molano (Reg. 39,777), Jennifer H. Hammond (Reg. 41,814), Marina N. Saito (Reg. 42,121), Lana M. Knedlik (Reg. 42,748), Alison P. Schwartz (Reg. 43,863), Christopher P. Rauch (Reg. 45,034), Francisco A. Rubio-Campos (Reg. 45,358), Gregory B. Gulliver (Reg. 44,138) and Brian J. Gill (Reg. P46,727); of the firm of Sonnenschein, Nath & Rosenthal, with full power of substitution and revocation, to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith and request that all correspondence and telephone calls in respect to this application be directed to::

**SONNENSCHN NATH & ROSENTHAL**

80<sup>th</sup> Floor – Sears Tower

233 S. Wacker Drive, Chicago, IL 60606

Telephone 312/876-8000

Facsimile 312/876-3974

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor **AKIO MACHIDA**

Inventor's signature Akio Machida Date July 9, 2001  
Residence Kanagawa, Japan  
Citizenship Japan  
Post Office Address c/o Sony Corporation, 7-35, Kitashinagawa 6-chome  
Shinagawa-ku, Tokyo 141, Japan

Full name of second inventor **DHARAM PAL GOSAIN**

Inventor's signature Dharam Pal Gosain Date July 9, 2001  
Residence Kanagawa, Japan  
Citizenship Japan  
Post Office Address c/o Sony Corporation, 7-35, Kitashinagawa 6-chome  
Shinagawa-ku, Tokyo 141, Japan

Full name of third inventor **TAKASHI NOGUCHI**

Inventor's signature Takashi Noguchi Date July 13, 2001  
Residence Kanagawa, Japan  
Citizenship Japan  
Post Office Address c/o Sony Corporation, 7-35, Kitashinagawa 6-chome  
Shinagawa-ku, Tokyo 141, Japan

Full name of fourth inventor

SETSUO USUI

Inventor's signature

Setuo Usui

Date

July 9, 2001

Residence

Kanagawa, Japan

Citizenship

Japan

Post Office Address

c/o Sony Corporation, 7-35, Kitashinagawa 6-chome

Shinagawa-ku, Tokyo 141, Japan



**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

SEPTEMBER 26, 2001

PTAS

SONNENSCHN NATH & ROSENTHAL  
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P.O. BOX #061080  
WACKER DRIVE STATION, SEARS TOWER  
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\*101789762A\*

**UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT**

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 07/23/2001

REEL/FRAME: 011999/0419  
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

MACHIDA, AKIO

DOC DATE: 07/09/2001

ASSIGNOR:

GOSAIN, DHARAM PAL

DOC DATE: 07/09/2001

ASSIGNOR:

NOGUCHI, TAKASHI

DOC DATE: 07/13/2001

ASSIGNOR:

USUI, SETSUO

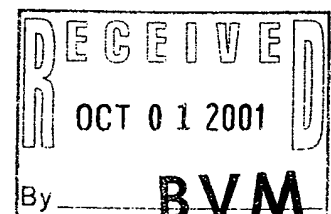
DOC DATE: 07/09/2001

ASSIGNEE:

SONY CORPORATION  
7-35, KITASHINAGAWA 6-CHOME  
SHINAGAWA-KU, TOKYO 141, JAPAN

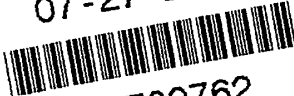
SERIAL NUMBER: 09718269  
PATENT NUMBER:

FILING DATE: 11/22/2000  
ISSUE DATE:



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LAZENA MARTIN, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

07-27-2001  101789762		U.S. DEPARTMENT OF COMMERCE Patent and Trademark
FORM PTO-1595 <span style="float: right;">RE</span> 1/31/92 Office		
To the Honorable Commissioner of Patents and Trademarks: Please Record the attached original documents or copy thereof.		
1. Name of conveying party(ies): <div style="text-align: right; font-size: 1.2em; margin-right: 20px;">7-23-01</div> AKIO MACHIDA DHARAM PAL GOSAIN TAKASHI NOGUCHI SETSUO USUI  Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2. Name and address of receiving party(ies): Name: <u>Sony Corporation</u>  Internal Address: <u>7-35, Kitashinagawa 6-chome</u> <u>Shinagawa-ku, Tokyo 141, Japan</u>  Street Address: _____  City: _____ State: _____ Zip: _____  Additional Name(s) & Address(es) attached <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
3. Nature of conveyance: <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Other <u>July 9 and 13, 2001</u> Execution Date	<div style="border: 1px solid black; padding: 10px; text-align: center; margin: 10px 0;">             JUL 23 2001           </div> 4. Application (number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is:  <div style="display: flex; justify-content: space-between;"> <div style="width: 60%;">             A. Patent Application No.(s)              U.S. Serial No. 09/718,269 filed November 22, 2000              Attorney Docket No. 097092909-4676           </div> <div style="width: 35%;">             B: Patent No.(s)           </div> </div> Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Name and address of party to whom correspondence concerning document should be mailed:  <b>SONNENSCHN NATH &amp; ROSENTHAL</b> P.O. Box #061080 Wacker Drive Station Sears Tower Chicago, IL 60606-1080 Customer ID No. 26263	6. Total number of applications and patents involved <u>1</u>  7. Total Fee (37 CFR 3.41) ..... \$ <u>40.00</u> <input checked="" type="checkbox"/> Enclosed <input checked="" type="checkbox"/> Authorized to be charged to deposit account any Additional fees  8. Deposit Account Number: <u>19.3140</u> <small>(Attach duplicate copy of this page if paying by deposit account)</small>	
DO NOT USE THIS SPACE		
9. Statement and signature: To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.		
<u>David R. Metzger</u> Name of Person Signing	<u>David R. Metzger</u> Signature	<u>July 18, 2001</u> Date Total number of pages 3
Mail documents to be recorded and required cover sheet information to: Commissioner of Patents and Trademarks Box Assignments Washington, D.C. 20231+		

07/26/2001 TDIAR1 00000040 09718269 40.00 OP  
 01 FC:581

## ASSIGNMENT

WHEREAS, I, as a below named inventor, residing at the address stated next to my name, am a sole inventor (if only one name is listed below) or a joint inventor (if plural names are listed below) of certain new and useful improvements in SEMICONDUCTOR DEVICE AND ITS MANUFACTURING METHOD

for which application for Letters Patent of the United States of America was executed by me on the date indicated next to my name and address;

AND WHEREAS, Sony Corporation, a Japanese corporation with offices at 7-35 Kitashinagawa 6-Chome, Shinagawa-Ku, Tokyo, Japan (hereinafter referenced as ASSIGNEE) is desirous of acquiring all interest in, to and under said invention, said application disclosing the invention and in, to and under any Letters Patent or similar legal protection which may be granted therefor in the United States and in any and all foreign countries;

NOW THEREFORE, in consideration of the sum of One Dollar (\$1.00), and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, as a sole or joint inventor as indicated below, by these presents do hereby assign, sell and transfer unto the said ASSIGNEE, its successors, assigns, and legal representatives, the entire right, title and interest in the said invention, said application, including any divisions and continuations thereof, and in and to any and all Letters Patent of the United States, and countries foreign thereto, which may be granted for said invention, and in and to any and all priority rights and/or convention rights under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and to any other benefits accruing or to accrue to me with respect to the filing of applications for patents or securing of patents in the United States and countries foreign thereto, and I hereby authorize and request the Commissioner of Patents to issue the said United States Letters Patent to said ASSIGNEE, as the assignee of the whole right, title and interest thereto;

And I further agree to execute all necessary or desirable and lawful future documents, including assignments in favor of ASSIGNEE or its designee, as ASSIGNEE or its successors, assigns and legal representatives may from time-to-time present to me and without further remuneration, in order to perfect title in said invention, modifications, and improvements in said invention, applications and Letters Patent of the United States and countries foreign thereto;

And I further agree to properly execute and deliver and without further remuneration, such necessary or desirable and lawful papers for application for foreign patents, for filing subdivisions of said application for patent, and or, for obtaining any reissue or reissues of any Letters Patent which may be granted for my aforesaid invention, as the ASSIGNEE thereof shall hereafter require and prepare at its own expense;

And I further agree that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Letters Patent and legal equivalents in foreign countries as may be known and accessible to me and will testify as to the same in any interference or litigation related thereto;

And I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale.

And I hereby authorize and request my attorney(s) of record in this application to insert the serial number and filing date of this application in the spaces that follow: Serial Number: 09/718,269, Filing Date: 11/22/2000.

This assignment executed on the dates indicated below.

AKIO MACHIDA

Name of first or sole inventor

Execution date of U.S. Patent Application

KANAGAWA, JAPAN

Residence of first or sole inventor

*Akio Machida*

*July 9, 2001*

Signature of first or sole inventor

Date of this assignment

DHARAM PAL GOSAIN

Name of second inventor

Execution date of U.S. Patent Application

KANAGAWA, JAPAN

Residence of second inventor

Signature of second inventor

*Dharam Pal Gosain*

*July 9, 2001*

Date of this assignment

TAKASHI NOGUCHI

Name of third inventor

Execution date of U.S. Patent Application

KANAGAWA, JAPAN

Residence of third inventor

Signature of third inventor

*Takashi Noguchi*

*July 13, 2001*

Date of this assignment

SETSUO USUI

Name of fourth inventor

Execution date of U.S. Patent Application

KANAGAWA, JAPAN

Residence of fourth inventor

Signature of fourth inventor

*Setso Usui*

*July 9, 2001*

Date of this assignment

Name of fifth inventor

Execution date of U.S. Patent Application

Residence of fifth inventor

Signature of fifth inventor

Date of this assignment